

E1
Cmt
axially. No rotary movement is permitted. Each pole piece of the stator is connected to a radial core about which respective coils are wound. Thus, the coils also describe a helix about the axis of the stator. The structure of the transducer results in the magnetic circuit having a helical component that contributes to the axial movement of the rotor.

IN THE SPECIFICATION

Please replace the paragraph beginning on page 9 line 16 with the following:

E2
Cmt
--Turning now to Figures 4a to 4f, these Figures show the varying relationship between the cylindrical surfaces of the pole pieces 2 and the segments 8, 9 in planar form (i.e. unwrapped). As illustrated in Figures 4a to 4f, the helical components of both the rotor and stator have a common general angular orientation since both are angled in the same general direction from the axis, i.e. both are clockwise or counter clockwise helices. In Figure 4a the rotor 7 is in approximately its mid position with each outer pole piece 2 having two segment halves 8, 9, one north and one south, adjacent it. With no current flowing through the coils 5, 6 the outer pole pieces 2 become alternate north and south poles, as is shown in Figure 4b. The rotor 7 therefore tries to align itself with the magnetisation of the pole pieces 2 and with no constraints, the helical geometry of the segments of the rotor 7 would enable alignment by both axial and rotational movement. However, as mentioned